

REMARKS

Claims 1 and 3-10 continue to be pending in this patent application. Claims 7-10, drawn to a non-elected invention, stand withdrawn from further consideration.

No amendments to the claims have been made in this paper.

INTERVIEW WITH EXAMINER

Applicant is most appreciative of the courtesies and consideration extended by the Examiner to its representative, Frederick R. Handren (Reg. No. 32,874), during a telephonic interview with the Examiner, Christopher K. VanDeusen, and his supervisor, Walter D. Griffin, on December 14, 2010.

As indicated generally in the INTERVIEW SUMMARY prepared by the Examiner and dated December 20, 2010, Applicant's representative argued that the four prior art references on which the Examiner relied to support the rejection of claims 1, 3 and 5, as stated on pages 3-7 of the December 6, 2010 Office Action, were not obviously combinable as asserted by the Examiner and could not meet the combination of steps required by independent claim 1. Applicant's representative also challenged the Examiner's characterization of the teachings in the references and the rationale used by the Examiner for combining the teachings. The Examiners said that the rejection would be reconsidered in view of arguments presented in a Reply to the Office Action.

PRIOR ART REJECTION I

Claims 1, 3 and 5 were rejected under 35 USC § 113(a) under 35 USC § 103(a) as being unpatentable over EP 0 679 406 A1 (Berendsen) in view of WO 00/59533 (McPhail), US 6290558 B1 (Erickson) and US 5511570 (Noren et al.). Applicant traverses this rejection.

The method disclosed and claimed in this patent application employs a combination of steps whereby soiled items in a closed chamber are automatically cleaned, disinfected and dried. The items in the chamber are disinfected by heat and then cooled and dried using air. The use of air for cooling and drying of cleaned items in the chamber reduces water consumption and prevents recontamination of the cleaned items. While the chamber door is closed, residual steam and exhaust air are conveyed via an exhaust air duct with an exhaust air valve into an outflow

providing for gravity flow of liquid from a lower end of the chamber. The residual steam and exhaust air are not emitted to the ambient atmosphere but rather are introduced into the outflow at a location downstream of a siphon bend in the outflow. When the chamber door is opened for removal of the cleaned items, gases released from the chamber do not contaminate the surroundings, are relatively cool and do not present a danger to nearby personnel. Since the exhaust gases have been conveyed to the outflow from the chamber at a location downstream of the siphon bend, odorous gases that might have accumulated in the chamber are prevented from being released to the surroundings. These attributes of the disclosed and claimed method cannot be realized in known cleaning apparatuses.

On page 4 of the Office Action, the Examiner concedes that "Berendsen '406 does not teach that the outflow is at a lower end of the chamber, from which liquid can flow by gravity; that the exhaust duct has an exhaust valve, wherein the outflow contains a siphon bend; and the exhaust duct opens into the outflow at a location downstream of the siphon bend." That is, the Examiner acknowledges that there are at least four attributes of the method recited in claim 1 that are not met by the disclosure in Berendsen. On pages 4-6, the Examiner contends that these deficiencies in the Berendsen disclosure vis-à-vis the requirements of claim 1 can be remedied by modifications to the Berendsen method and apparatus that are made obvious by teachings in McPhail, Erickson and Noren et al.

The Examiner characterizes McPhail as teaching "a method wherein an exhaust duct contains an exhaust valve (122 of figure 8; pg 13, lines 1-5) and the exhaust valve conveys air from the device (pg 13, lines 1-5) in order to regulate the pressure in the device (pg 13, lines 1-5)" and further teaching "a method wherein an outflow contains a siphon bend (figure 8 shows several bends in the outflow after the exhaust valve)." The Examiner contends, "Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have provided a method as claimed in view of Berendsen '406, in further view of McPhail '553, in order to regulate the pressure in the device."

The Examiner acknowledges, however, that the foregoing combination of the Berendsen and McPhail teachings "are silent as to a method wherein the outflow is at a lower end of the chamber, from which liquid can flow by gravity and wherein an exhaust duct opens into the outflow at a location downstream of a siphon bend." The Examiner then takes the teachings in

McPhail a step further, contending that the "combination of Berendsen '406 and McPhail '553 could be modified such that the outflow contained a siphon bend such that the exhaust duct opened into the outflow at a location downstream of the siphon bend as a matter of a change in shape without unexpected results. Such modifications have been held within the ambit of one having ordinary skill in the art; see MPEP § 2144.04."

The method and apparatus disclosed by Berendsen is specifically designed for the cleaning of small volume passages, such as those found in pneumatically powered dental tools. In the Berendsen apparatus, tubes carrying supplies of cleaning and drying agents are coupled with individual passages in the tools via couplings $A_1, A_2, A_3, \dots A_n$ in the rear wall of a bowl 7 disposed behind lid 8 of cupboard 3. In the Berendsen apparatus and method, the cleaning and drying agents undergo a forced flow through the individual passages in the tools during the cleaning process. Although the cleaning and drying agents are introduced into passages of tools disposed within a chamber in the Berendsen apparatus formed by bowl 7 and lid 8, these cleaning and drying agents are not introduced into the chamber *per se*. In Berendsen, there is no disclosure whatsoever of a gravity drain from the chamber, much less a gravity drain *and* an exhaust duct, as the Examiner apparently has proposed.

McPhail discloses a table-top sterilizer for medical instruments in which the instruments to be sterilized are held in a cassette 28 placed in a cavity 4 that can be sealed by a door 6. As stated in the Abstract, a steam circuit provides steam to the cassette for sterilizing the instruments. To enhance the sterilization process and reduce the time required for sterilization a vacuum generated by a two-stage vacuum pump 92 is applied to the cavity and to the cassette to withdraw air from the cavity and the cassette. In the McPhail apparatus, the pressures in the cavity, the cassette and the fluid circuits are regulated by controlling the application of vacuum. There is no mention of gravity flow in the McPhail disclosure, and there are no elements in the McPhail apparatus that are identified as, or could serve as, "siphon bends."

As noted above, the method taught by Berendsen requires a pressurized flow of cleaning and drying agents through passages in items to be cleaned. There is no disclosure in Berendsen or McPhail suggesting that application of a vacuum, as taught by McPhail, would be advantageous in a method that requires pressurized flow. There are no siphon bends whatsoever in the McPhail apparatus, much less a siphon bend that would be located, as proposed by the

Examiner, in an exhaust conduit that provides for gravity flow. Applicant submits, therefore, that the modification proposed by the Examiner could not be realized using teachings in McPhail.

On page 5 of the Office Action, the Examiner characterizes Erickson as belonging to "an analogous art of fluid flow devices" and teaching "a method wherein an outflow contains a siphon bend and an exhaust duct opens into the outflow at a location downstream of the siphon bend (figure 7; col. 5, line 60 - col. 6, line 10) in order to mix the output streams efficiently (col. 6, lines 11-35)." The Examiner contends, "Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to have provided a method wherein the outflow contains a siphon bend and the exhaust duct opens into the outflow at a location downstream of the siphon bend in the method of Berendsen '406, in view of Erickson '558, in order to mix the output streams efficiently."

What the Examiner does not say is that the siphon bend disclosed by Erickson is used in an exhaust elbow in the exhaust system of a marine propulsion engine, that the "output streams" are formed by cooling water and exhaust gases from the engine and that the siphon bend is used prevent the backflow of water into the engine. The teachings in Erickson are obviously far afield from, and not analogous with, the technology employed in the cleaning method and apparatus disclosed by Berendsen, and Applicant submits that the teachings in Erickson cannot be reasonably viewed as obviously applicable to the Berendsen method as the Examiner contends.

On page 8 of the Office Action, the Examiner states, "Applicant's arguments filed 10/19/2010 have been fully considered but they are not persuasive. These arguments were addressed in the Advisory Action dated 10/25/2010." In the continuation sheet of the Advisory Action, the Examiner "addresses" Applicant's arguments by saying, "Erickson is directed to solving the problem of preventing backflow in a fluid flow system," Applicant views this statement as nothing more than a re-wording of the characterization of Erickson stated on page 5 of the outstanding Office Action. Applicant concedes that the teachings in Erickson might be obviously applicable to another marine propulsion engine but cannot conceive of these teachings as being applicable to *all* fluid flow systems, as the Examiner seems to suggest. So, *if this rejection is going to be maintained*, Applicant again respectfully requests that the Examiner *fully explain* how the exhaust elbow used by Erickson in a marine propulsion engine can be fairly

regarded as being analogous with and obviously applicable to the cleaning method and apparatus taught by Berendsen.

On page 5 of the Office Action, the Examiner acknowledges that "The combination of Berendsen '406, McPhail '553, and Erickson '558 is silent as to a method wherein the outflow is at a lower end of the chamber, from which liquid can flow by gravity."

The Examiner cites Noren et al. for its disclosure of "a method wherein an outflow is at a lower end of the chamber, from which liquid can flow by gravity (col. 2, lines 42-44) in order to drain the chamber (col. 2, lines 42-44)." The Examiner contends, "Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to have provided a method wherein an outflow is at a lower end of the chamber, from which liquid can flow by gravity in the method of Berendsen '406, McPhail '553, and Erickson '558, in further view of Noren '570 in order to drain the chamber."

For reasons made evident in the discussion above, the "method of Berendsen '406, McPhail '553, and Erickson '558" is not viable, much less a method made obvious by the teachings in Berendsen, McPhail and Erickson. The teachings in Noren et al. cannot cure the gross deficiencies in the proposed combination of Berendsen, McPhail and Erickson vis-à-vis the requirements of Applicant's claim 1.

Claims 3 and 5 are patentable at least because of their dependence from patentable claim 1.

In view of the foregoing observations and arguments, Applicant submits that no reasonable combination of the disclosures in Berendsen, Erickson, McPhail and Noren can properly serve as a basis for rejecting independent claim 1 and dependent claims 3 and 5 under 35 USC § 103(a). This rejection should not be maintained, and Applicant respectfully requests that it be withdrawn.

PRIOR ART REJECTION II

Claims 4 and 6 were rejected under 35 USC § 103(a) as being unpatentable over Berendsen, McPhail, Erickson and Noren and further in view of US 5225160 (Sanford). Applicant traverses this rejection.

On page 7 of the Office Action, the Examiner acknowledges that the disclosures in Berendsen, Erickson, McPhail and Noren et al. "do not specify the use of ambient air for the cooling of objects; rather, it specifies the use of compressed air."

The Examiner characterizes Berendsen as teaching "that flushing through air accelerates the cleaning process by discharging condensation and residual heat" and characterizes Sanford et al. as teaching "the circulation of ambient air in cooling objects after steam sterilization (col. 5, lines 3-7) as an equivalent method of accelerating the cleaning process." The Examiner contends, "it would have been obvious to one having ordinary skill in the art at the time the invention was made to circulate the ambient air of Stanford '1 60, as an alternative equivalent in the method of Berendsen '406, Erickson '558, McPhail '553 and Noren '570 in order to accelerate the cleaning process."

Without acquiescing in the Examiner's proposal to modify the proposed Berendsen-Erickson-McPhail-Noren et al. method to incorporate teachings from Sanford, Applicant notes that there are no teachings in Sanford that can remedy deficiencies in the Berendsen, Erickson, McPhail and Noren et al. disclosures vis-à-vis the requirements of Applicant's independent claim 1, as explained above. That is, no reasonable combination of the disclosures in Berendsen, Erickson, McPhail, Noren et al. and Sanford could yield a method that could satisfy the requirements for the method recited in dependent claims 4 and 6.

In view of the foregoing observations and arguments, Applicant submits that no reasonable combination of the disclosures in Berendsen, Erickson, McPhail, Noren et al. and Sanford can properly serve as a basis for rejecting claims 4 and 6 under 35 USC § 103(a). Applicant therefore requests that this rejection be withdrawn.

REJOINDER OF CLAIMS TO NON-ELECTED INVENTION

Currently withdrawn claims 7-10 require all of the limitations of claims 1 and 3-6, which are allowable for reasons presented the discussions above. Applicant therefore requests that claims 7-10 be rejoined with claims 1 and 3-6, considered by the Examiner and allowed along with claims 1 and 3-6.

OTHER PRIOR ART

Applicant has considered the other prior art cited by the Examiner. Applicant is not commenting on this prior art, because it was not applied against the claims in this application.

CONCLUSION

In view of the observations and arguments presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the rejections stated in the outstanding Office Action and recognize all of the pending claims as allowable.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be addressed and resolved expeditiously.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

By


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